5S – Work Space

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Part I: General Overview of Business

- M. A. Ford founded in 1919
- Started making rotary files and has grown to make High Performance Cutting Tools
- Standard cutting tools (small and large end mills, countersinks, burrs and reamers), custom cutting tools and tool reconditioning

Part II: Job Specifics

- Use AutoCAD to create a plan to propose an efficient manufacturing layout to increase production
- The engineering and maintenance departments work collaboratively to keep the factory running, including solving production related problems and implementing new equipment

Part III: Introduce the Problem

- Machine areas need to be clean and standardized with the correct tooling, as each machine is different
- Students practice 5S, a methodology discussed in CIM (Computer Integrated Manufacturing) class. Using the 5S principles, students design 2 to 3 proposals of work areas for a machine
- 5S = Sort, Set In Order, Shine, Standardize, & Sustain

Part IV: Background

- Skills needed – math, critical thinking and gather information using the internet (price of a tools and materials)
- To solve the problem, employees will need to be trained on 5S
- https://en.wikipedia.org/wiki/5S_(methodology)
- https://www.kaizen.com/knowledge-center/what-is-5s.html

Part V: Business Solution

- M.A. Ford would solve the problem by having several people involved in the operation of the machine, as well as maintenance and engineering to determine what tools are needed and ask the operators input in the set-up of tool storage.

Part VI: Student Solutions

- Teams will meet with the operator to determine the specifics for the machine. Teams would propose 2-3 ideas, including costs of each proposal and iterate as needed. Team will purchase and build the machine tool storage and train the operator(s) on the specifics for each machine.